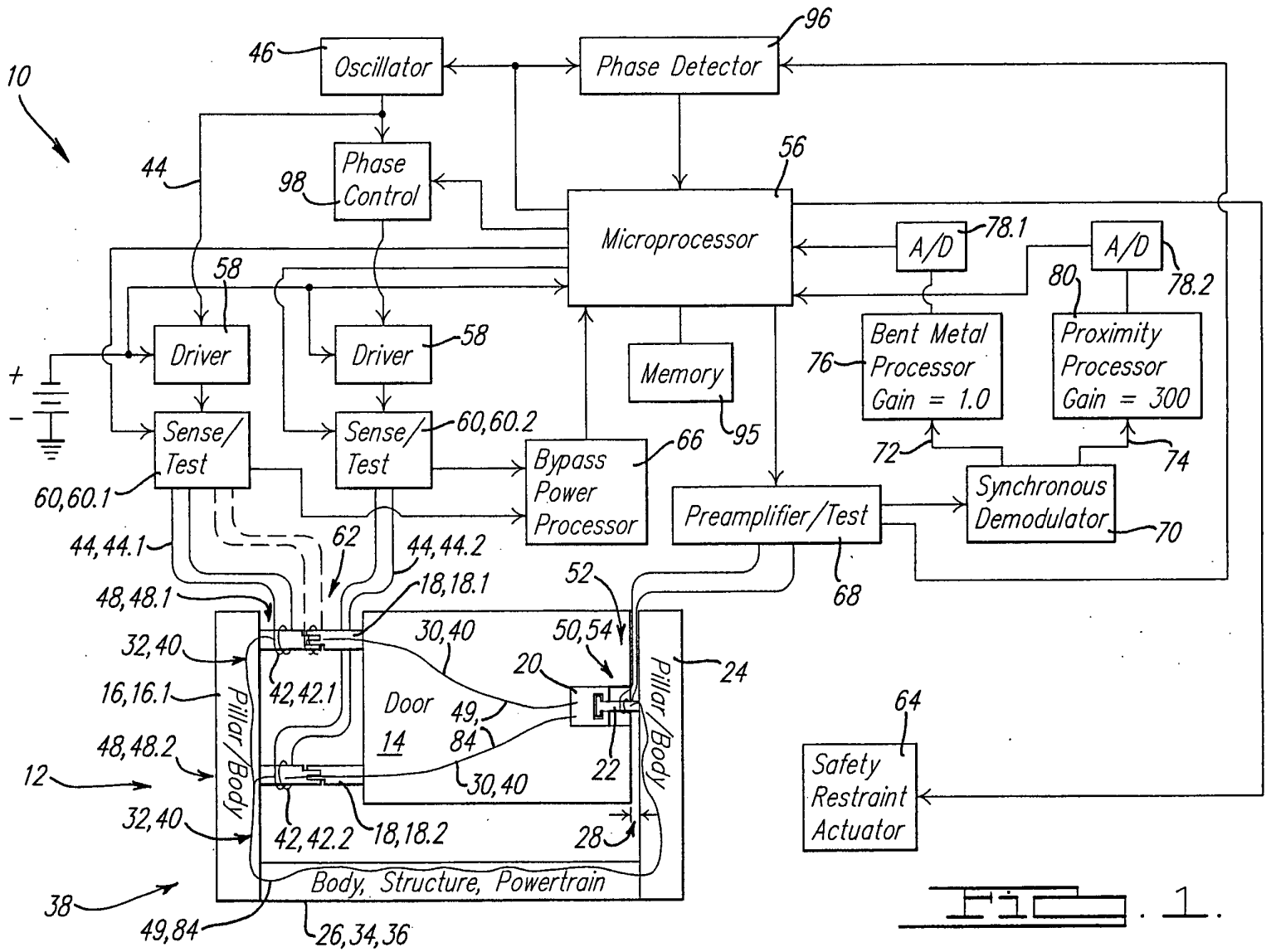
10
46
Oscillator
Phase Detector
96
44
98
Phase Control
56
Microprocessor
A/D
78.1
A/D
78.2
80
58
Driver
Driver
58
Memory
Bent Metal Processor Gain = 1.0
76
Proximity Processor Gain = 300
+
-
Sense/ Test
Sense/ Test
60,60.2
Bypass Power Processor
66
95
72
74
60,60.1
Preamplifier/Test
Synchronous Demodulator
70
68
44,44.1
62
44,44.2
52
48,48.1
18,18.1
30,40
50,54
32,40
20
24
16,16.1
42,42.1
Door 14
49,84
Pillar/Body
Pillar/Body
48,48.2
12
30,40
22
64
Safety Restraint Actuator
32,40
42,42.2
18,18.2
28
Body, Structure, Powertrain
38
49,84
26,34,36

Fig. 1.

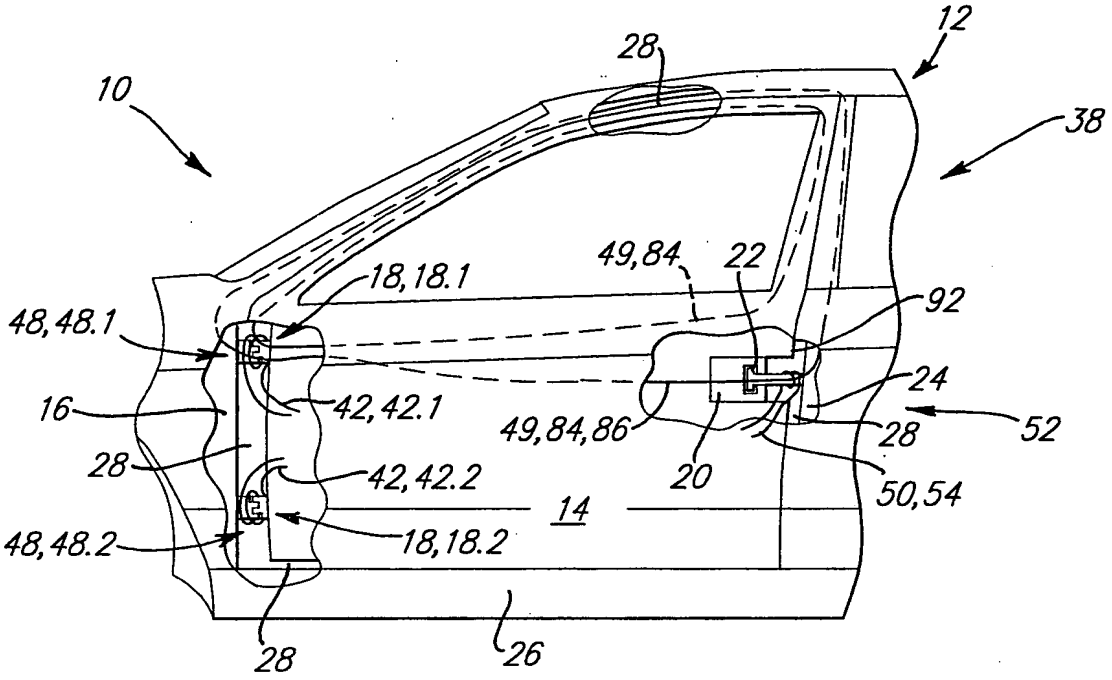
12
28
10
38
49,84
22
18,18.1
92
48,48.1
24
16
42,42.1
49,84,86
28
52
28
42,42.2
20
50,54
14
48,48.2
18,18.2
28
26

Fig. 2a.

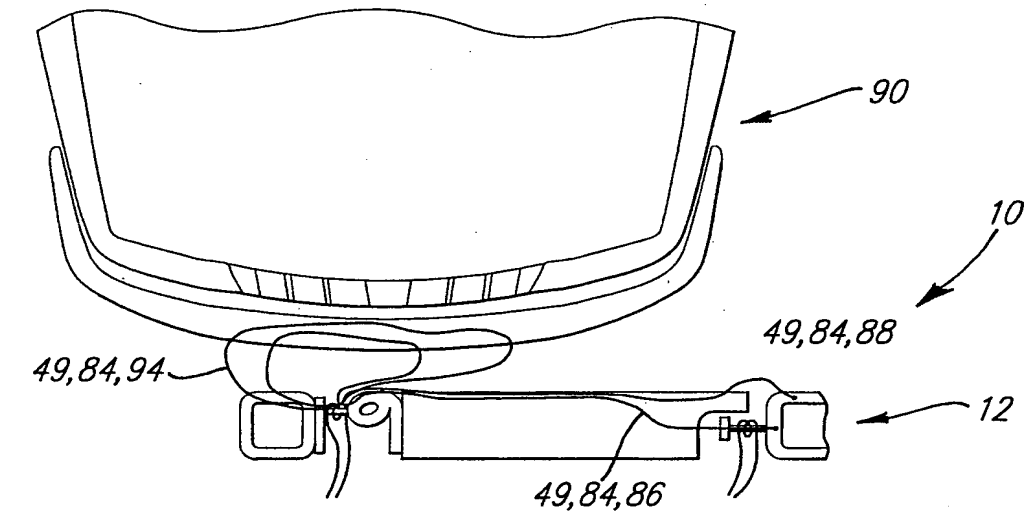
90
10
49,84,88
49,84,94
12
49,84,86

Fig. 2b.

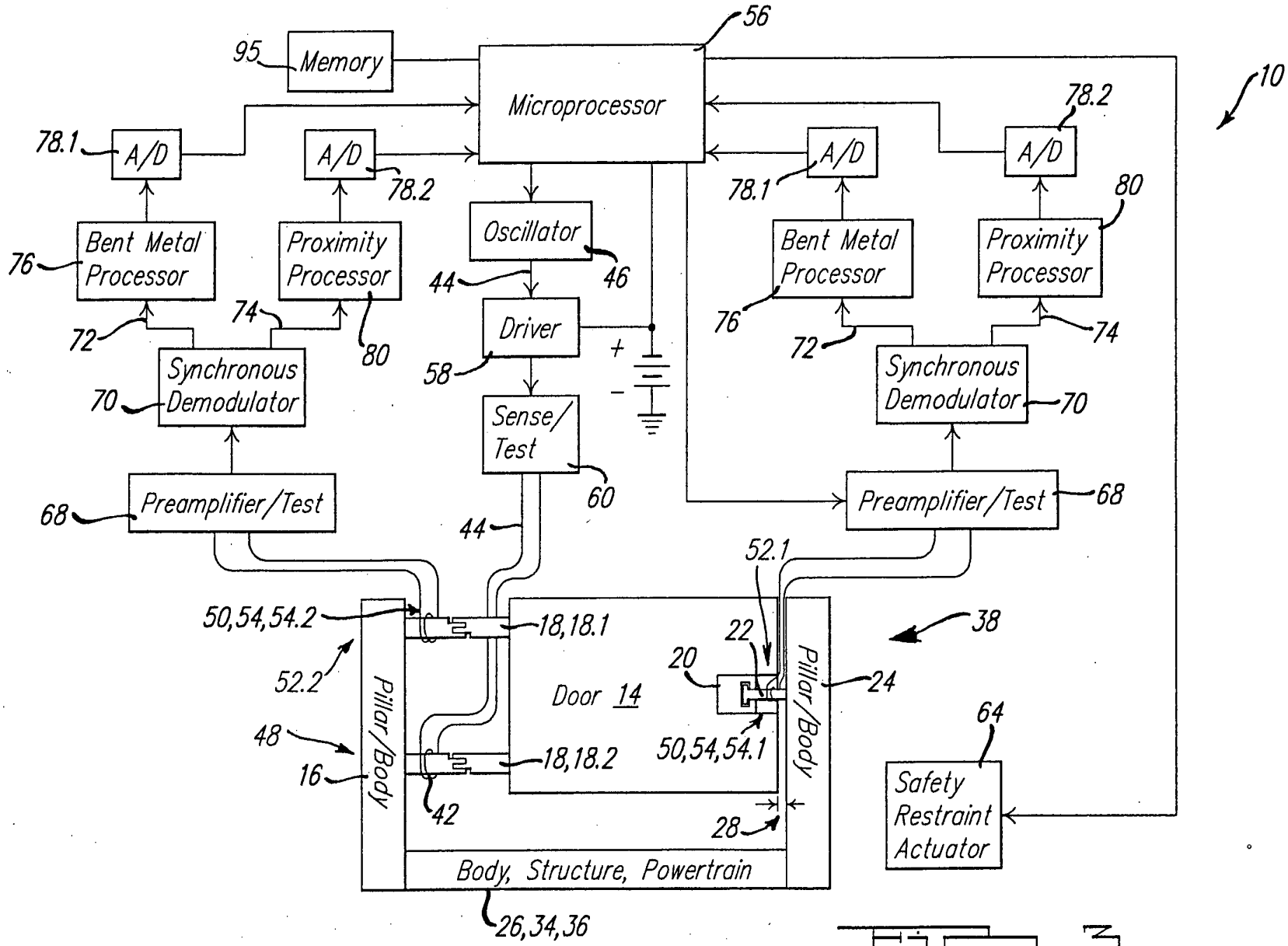
95
Memory
56
Microprocessor
10
78.1
A/D
78.2
A/D
78.1
A/D
78.2
A/D
76
Bent Metal Processor
Proximity Processor
80
Oscillator
46
44
Bent Metal Processor
76
Proximity Processor
80
72
74
Driver
74
72
58
+
-
Synchronous Demodulator
70
Synchronous Demodulator
70
Sense/ Test
60
68
Preamplifier/Test
Preamplifier/Test
68
44
52.1
50,54,54.2
18,18.1
22
38
20
Pillar/Body
24
52.2
Door 14
48
50,54,54.1
64
16
18,18.2
Pillar/Body
42
28
Safety Restraint Actuator
Body, Structure, Powertrain
26,34,36

FIG. 3.

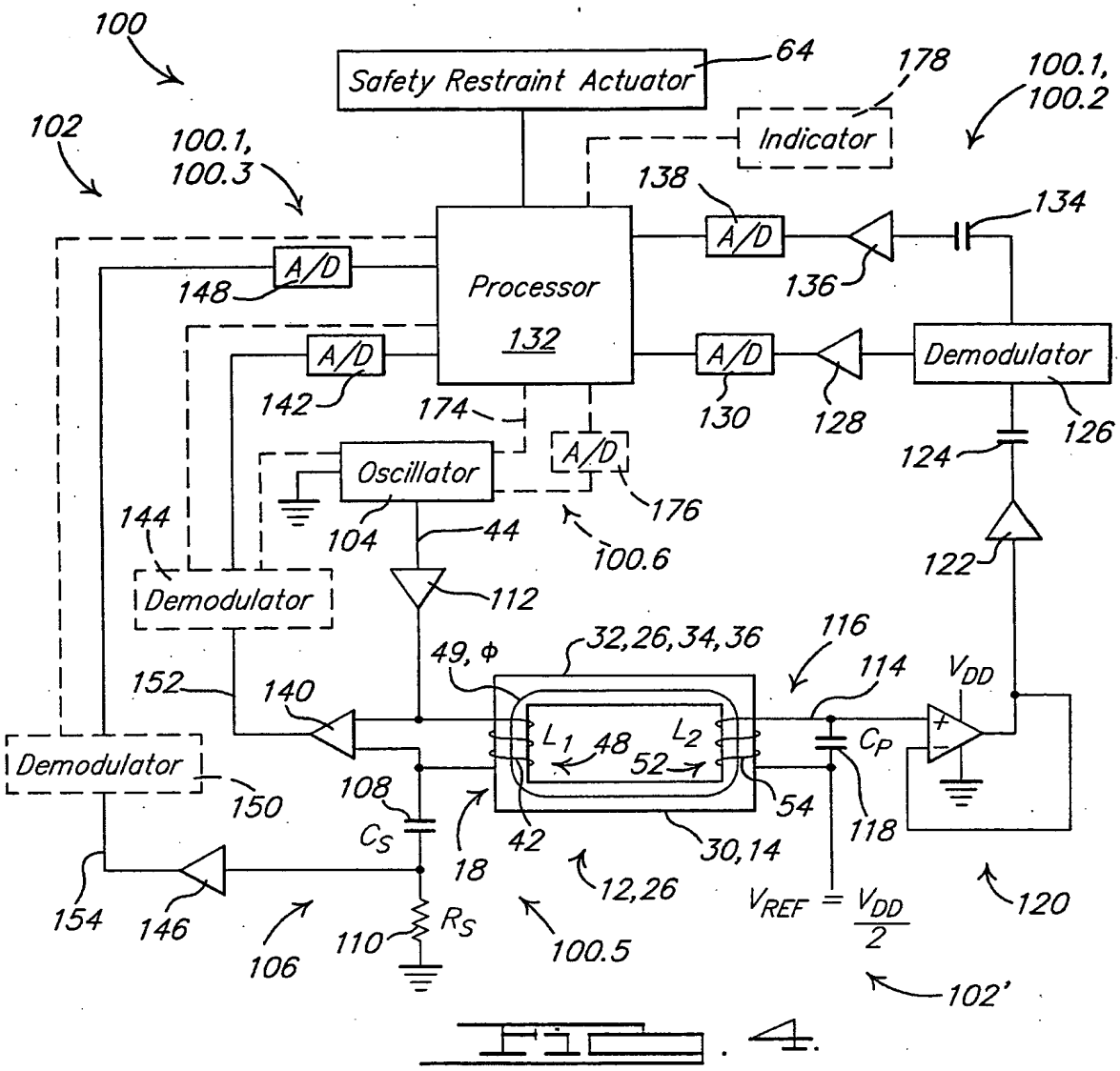

Fig. 4.

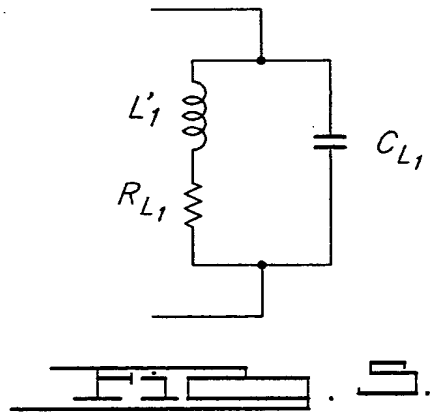

Fig. 5.

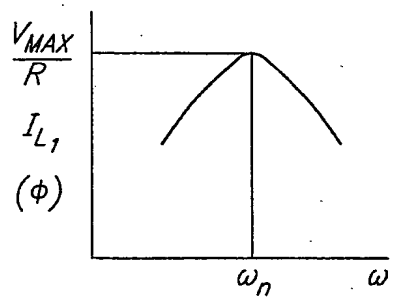

Fig. 6.

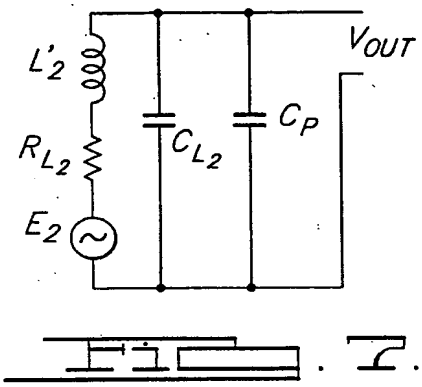

FIG. 2.

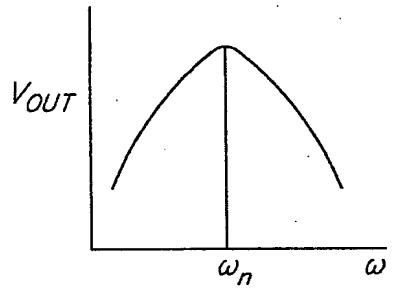

FIG. 3.

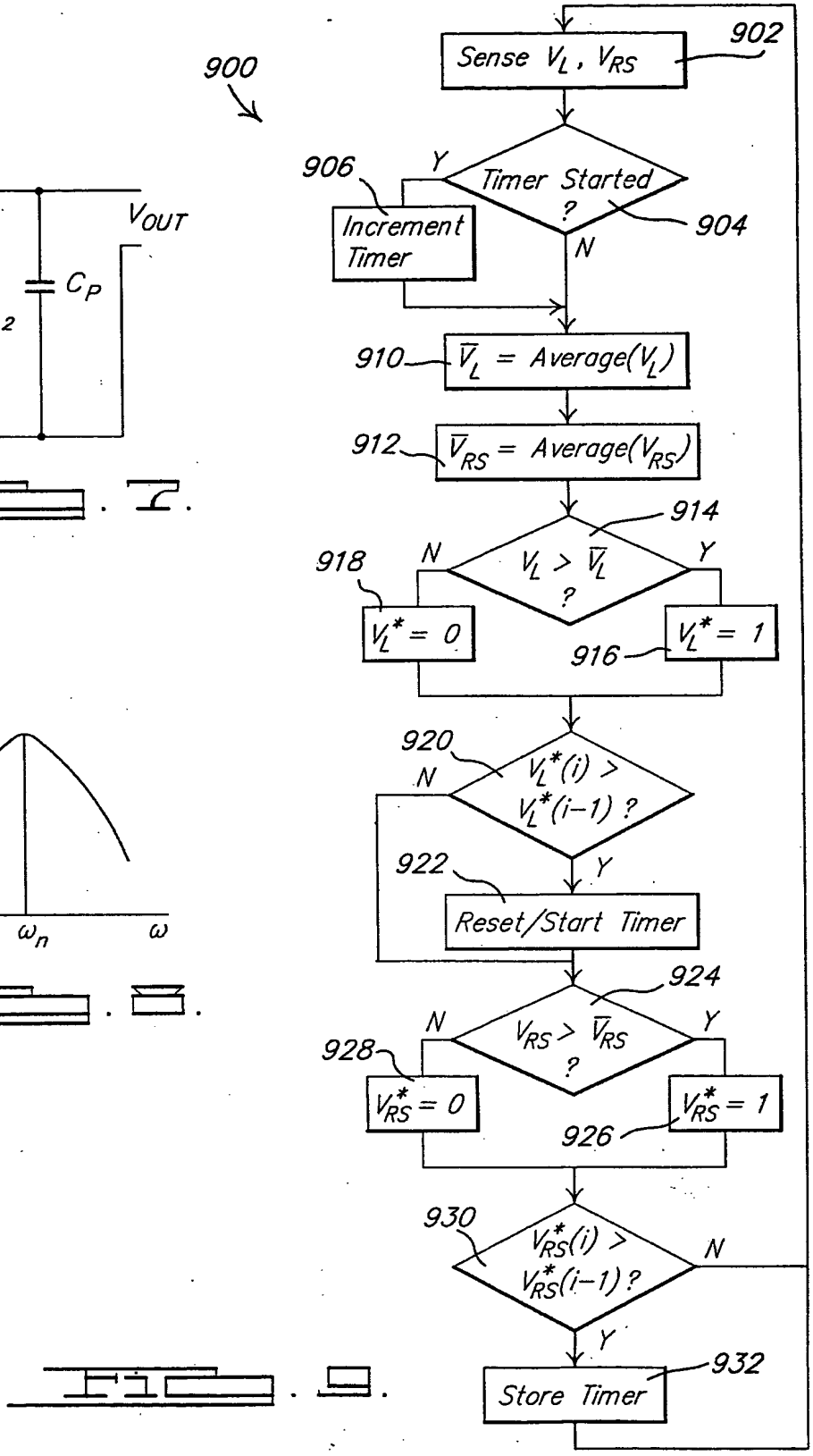

FIG. 4.

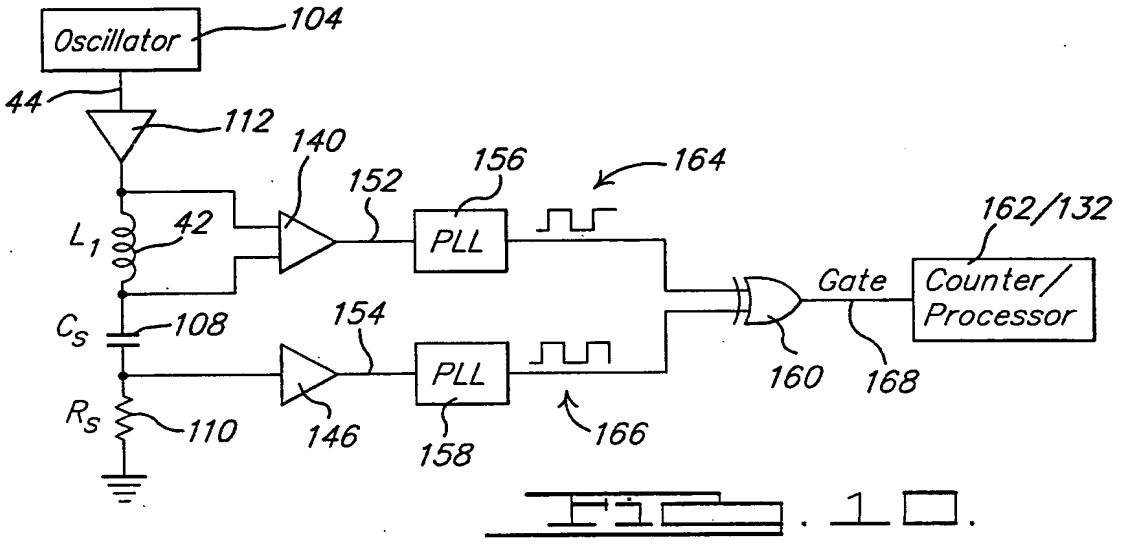
Oscillator
104
44
112
140
152
156
164
L_1
42
PLL
162/132
Gate
Counter/
Processor
C_S
108
154
PLL
160
168
R_S
110
146
158
166

FIG. 10.

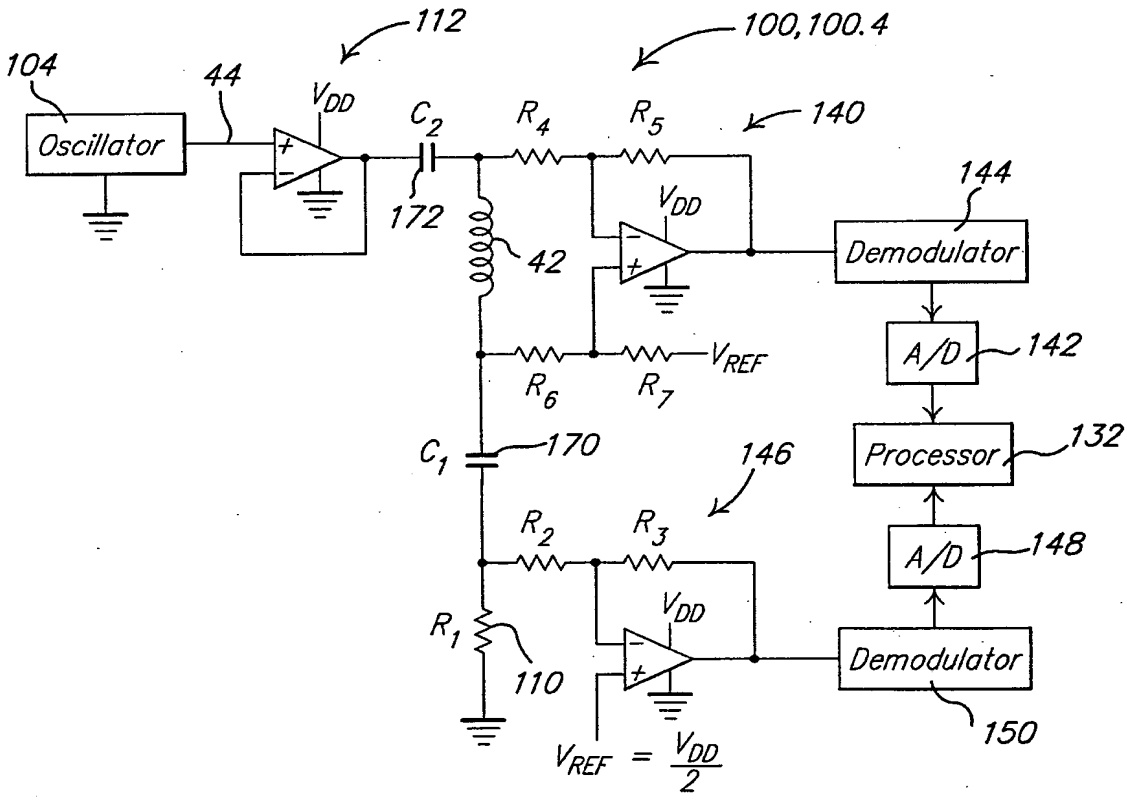
112
100,100.4
104
44
V_{DD}
C_2
R_4
R_5
140
Oscillator
144
V_{DD}
172
42
Demodulator
A/D
142
V_{REF}
R_6
R_7
C_1
170
146
Processor
132
R_2
R_3
A/D
148
V_{DD}
R_1
110
Demodulator
150
$V_{REF} = \frac{V_{DD}}{2}$

FIG. 11.

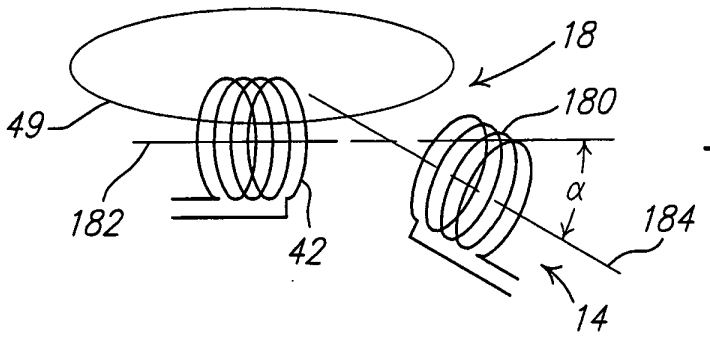
18
180
49
182
42
α
184
14

Fig. 12.

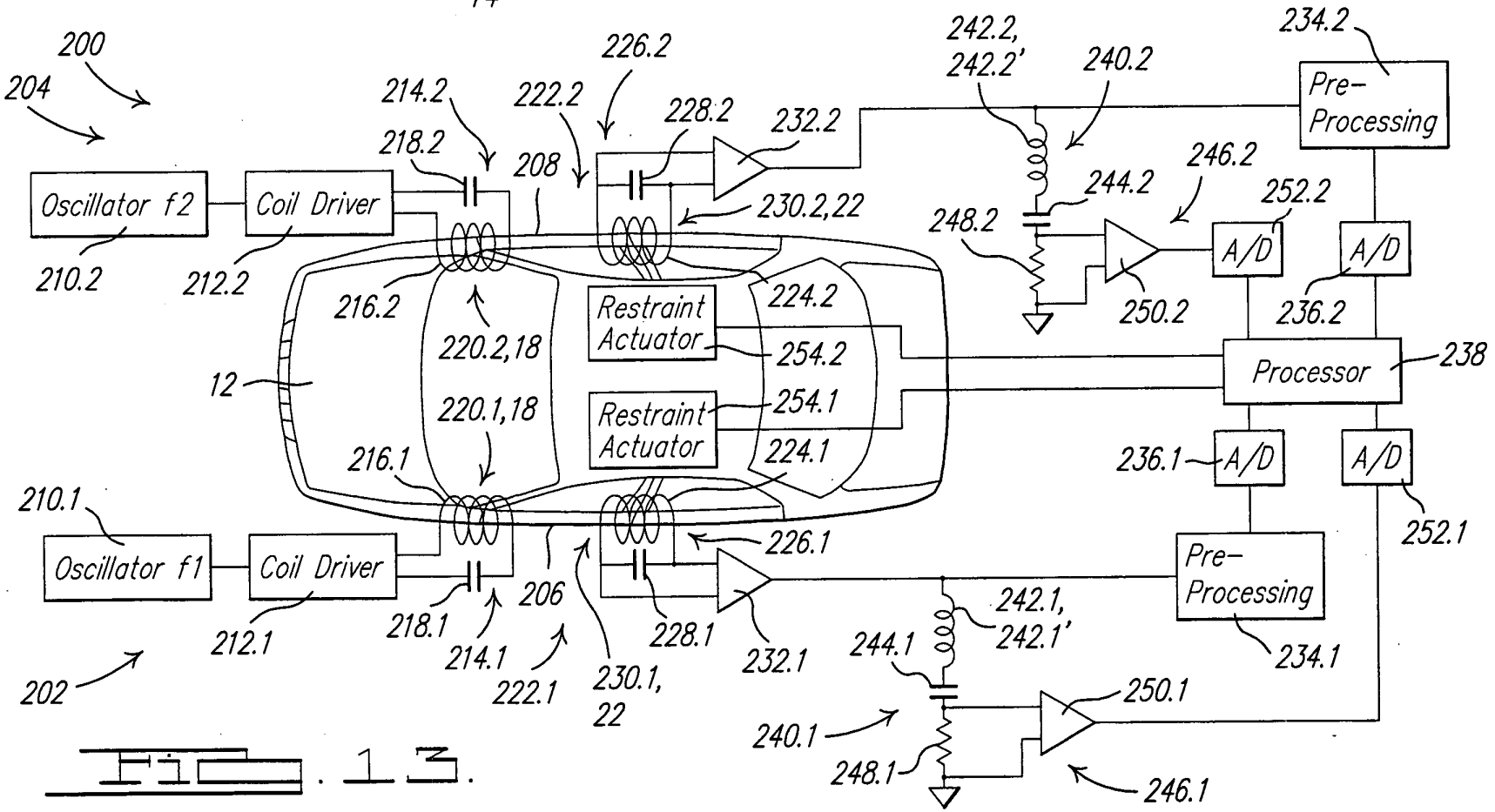
200
204
214.2
222.2
226.2
228.2
232.2
218.2
208
242.2,
242.2'
240.2
234.2
Pre-
Processing
246.2
244.2
252.2
Oscillator f2
Coil Driver
230.2,22
248.2
A/D
A/D
210.2
212.2
216.2
220.2,18
Restraint
Actuator
224.2
250.2
236.2
12
254.2
Processor
238
220.1,18
Restraint
Actuator
254.1
216.1
224.1
236.1
A/D
A/D
210.1
226.1
Oscillator f1
Coil Driver
Pre-
Processing
206
242.1,
242.1'
252.1
218.1
228.1
212.1
244.1
234.1
214.1
232.1
222.1
230.1,
22
250.1
202
240.1
248.1
246.1

Fig. 13.